

BORDUKOVA, M.V., kand.biolog.nauk; ZAIKIN, B.A., agronom; OLINKA, Ye.V.,  
agronom

How to prevent the spreading of Phytophthora infection. Zashch.  
rast. ot vred. i bol. 8 no.8:38-40 Ag '63. (MIRA 16:10)

1. Moskovskaya kartofel'naya toksikologicheskaya laboratoriya  
Vsesoyuznogo instituta zashchity rasteniy.

ZAYKIN, D. A.

"Energy Levels of Nucleons in a Nonspherical Nucleus According to the Independent Particle Model. "

paper included in the program of the All-Union Conf. on Nuclear Reactions in Medium and Low Energy Physics, Moscow, 19-27 Nov 1957

ZAIRIN, D.A.

ZAIRIN, D.A.; KAZARNOVSKIY, M.V.

An approximate method for solving boundary problems with  
complicated boundary conditions. Us?.mat.nauk 12 no.4:175-176  
J1-Ag '57. (MIRA 10:1c)  
(Approximate computation) (Calculus of variations)  
(Elastic plates and shells)

ZAKIN, D.A.

56-4-36/54

AUTHOR: Zakin, D.A.

TITLE: On the Energy Levels of Nucleons in Spherical Nuclei  
(Ob urovnyakh energii nuklonov v sferoidal'nykh yadrakh)  
(Letter to the Editor)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 4,  
pp. 1049 - 1051 (USSR)

ABSTRACT: For an ellipse-shaped potential well the nucleon levels can be calculated by means of the perturbation theory, in which connection the extension into a series is carried out with the deformation parameter. But since this series badly converges, it cannot be used for the higher levels and for large deformations. A method is theoretically developed which permits to obtain a spectrum of higher states in an ellipse-shaped potential pot at any deformations. The calculation of the energy spectrum leads to the solution of a transcendental equation with regard to  $\gamma$  which develops from the joining together of the wave functions at  $u = u_0$ . At present energy spectra are numerically calculated in an ellipse-shaped potential pot at various deformations.

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On the Energy Levels of Nucleons in Spherical Nuclei

56-4-36/54

ASSOCIATION: Physical Institute AN USSR imeni P.N. Lebedev  
(Fizicheskii institut imeni P.N. Lebedeva Akademii nauk SSSR)

SUBMITTED: June 28, 1957

AVAILABLE: Library of Congress

Card 2/2

ZAIKIN, D. A., Candidate Phys-Math Sci (diss) -- "The theory of nonspecific nuclei according to the model of independent particles" Moscow, 1959. 8 pp  
(Acad Sci USSR, Phys Inst im P. N. Lebedev), 150 copies (KL, No 25, 1959, 126)

21 (7)  
AUTHOR:

Zaikin, D. A.

NOV/56-35-2-42/60

TITLE:

On the Deviation of the Equilibrium Shape of  
Atomic Nuclei From Axial Symmetry (Ob otklonenii  
ravnovesnoy formy atomnykh yader ot aksialnoy simmetrii)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958,  
Vol 35, Nr 1 (7), pp 529-530 (USSR)

ABSTRACT:

The analysis of the experimental data concerning the  
levels of atomic nuclei showed that some nuclei have no  
symmetry axis. It is interesting, therefore, to investigate  
the behavior of nucleons in a potential field without  
axial symmetry. As an example of such a field, an infinitely  
deep potential well with vertical walls is investigated in  
this paper. This well has the shape of an ellipsoid with the  
semiaxes  $a_x R_0$ ,  $a_y R_0$ ,  $a_z R_0$ , where  $R_0$  denotes the radius of  
a sphere of corresponding size. The problem of obtaining  
the states of the nucleons in such a well can be reduced to  
the solution of the equation  $(2M)^{-1}(\hat{p}_x^2 + \hat{p}_y^2 + \hat{p}_z^2)\Psi_1(\vec{r}) =$   
 $= E_1 \Psi_1(\vec{r})$  within this ellipsoid. Calculations (according

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On the Deviation of the Equilibrium Shape of  
Atomic Nuclei From Axial Symmetry

NOV/56-35-2-42/60

to the methods of the perturbation theory) are discussed. The degeneration with respect to  $m$  is cancelled totally already in the first order of the perturbation theory. The calculations carried out in consideration of the second order give rather long formulae for the energies which for  $\alpha = 0$  (axial symmetry) are converted into the corresponding Moszkowski formulae (Ref 2). For the example of the s-shells and p-shells the behavior of the nucleon levels may be investigated qualitatively. The corresponding expressions for the energy levels and for the wave functions are given explicitly. According to these expressions, the spherical shape is best suited for an occupied shell. For an occupied shell, beginning with the third nucleon, the equilibrium shape will differ from the spherical and also from the axial-symmetric shape. A numerical example is given. A similar analysis of the deviations of the equilibrium shape of real nuclei from axial symmetry will be published in a following paper. The author thanks A. S. Davydov who discussed the results of this paper. There are 4 references, 2 of which are Soviet.

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On the Deviation of the Equilibrium Shape of  
Atomic Nuclei From Axial Symmetry

HOV/56-35-2-42/60

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR  
(Physics Institute imeni P. N. Lebedev, AS USSR)

SUBMITTED: May 9, 1958

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**ZAIXIN, D.A.**

Deviation of the equilibrium form of atomic nuclei from axial  
symmetry. Zhur. eksp. i teor. fiz. 35 no.2:529-530 Ag '58.  
(MIRA 11:10)

1. Fizicheskii institut imeni P.N. Lebedeva AN SSSR.  
(Nuclei, Atomic)

21(8)

AUTHORS:

Davydov, A. S., Zaikin, D. A.

SOV/56-36-1-31/62

TITLE:

On the  $\gamma$ -Oscillations of the Surfaces of an Atomic Nucleus  
(O  $\gamma$ - kolebaniyakh poverkhnosti atomnogo yadra)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,  
Vol 36, Nr 1, pp 233-237 (USSR)

ABSTRACT:

The authors investigate the stability of a nucleus with respect to the variation of the value  $\gamma$  corresponding to equilibrium for the minimum of potential energy. On the simple model of the anisotropic harmonic oscillator field for the individual nucleons, the following is shown: The energy of the first excited state, which corresponds to the  $\gamma$ -oscillations, is nearly of the same order of magnitude as the energy of the single-nucleon excitation. The reduced probability of the reduced quadrupole transitions to levels corresponding to the  $\gamma$ -oscillations is some hundred times lower than the corresponding probability of transition to the first rotation level of an axially-symmetric nucleus. According to the authors' opinion, these results confirm the high stability of the shape of the nucleus with respect to  $\gamma$ -oscillations. The first part of this paper deals with the potential energy of the surface oscillations

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On the  $\gamma$ -Oscillations of the Surfaces of an Atomic Nucleus

SOV/56-35-1-31/62

of the nucleus. The nucleons with the mass  $m$  are assumed to move in a potential of the type

$$V = (m\omega^2/2) \sum_{k=1}^3 (x_k/R_k)^2. \text{ Here it holds that}$$

$R_k = R \exp(\xi_k)$ ,  $\xi_k = \sqrt{5/4\pi} \beta \cos(\gamma - (2\pi/3)k)$ , where  $\beta$  and  $\gamma$  determine the shape of the nucleus. Besides, it holds that  $R_1 R_2 R_3 = R^3$ , so that  $\sum \xi_k = 0$  holds. The energy of each nucleon depends on 3 quantum numbers  $n_k$ . For each filled shell it holds that  $\sum_{sk} n_{sk} \xi_k = 0$ , and the total energy of the nucleons which fill several shells (magic nucleus), can be written down as

$$E_M = \hbar\omega(\varepsilon_0 + (1/2)D\beta^2), \quad \varepsilon_0 = \sum_s (n_s + (3/2)), \text{ where } D > 0$$

denotes the elasticity of the nucleus with respect to  $\beta$ -oscillations. The minimum energy of the nuclei with filled shells corresponds to the spherical shape of the nucleus. In

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On the  $\gamma$ -Oscillations of the Surfaces of an  
Atomic Nucleus

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the second chapter the  $\gamma$ -oscillations of the surface of an atomic nucleus are calculated. The Schrödinger (Shredinger)-equation for the determination of the energy of these oscillations is explicitly written down. The solutions of this equation are to be found in form of periodic even functions (with the period  $2\pi/3$ ) of  $\gamma$ . The authors confine themselves to dealing with the first four terms in the corresponding expansion in a series. Expressions are written down for the difference between the ground state and the first excited  $\gamma$ -oscillation level. The authors investigate especially the filling of a shell with  $N = 5$ . The third and last chapter of the present paper deals with the excitation probability of the  $\gamma$ -oscillations. An expression is written down for the transition probability of the nucleus from the ground state to the first excited  $\gamma$ -oscillation state under the action of an electromagnetic field. The reduced probability of the first  $\gamma$ -oscillation state is some hundred times smaller than the corresponding excitation probability of the first rotational state of the nucleus. There are 6 references, 3 of which are Soviet.

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On the  $\gamma$ -Oscillations of the Surfaces of an  
Atomic Nucleus

SOV/56-36-1-31/62

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR  
(Physics Institute imeni P. N. Lebedev of the Academy of  
Sciences, USSR)

SUBMITTED: July 10, 1958

Card 4/4

21(1), 24(5)

SOV/56-36-5-45/76

AUTHOR:

Zaikin, D. A.

TITLE:

On the Problem of the Axial Asymmetry of Atomic Nuclei (K voprosu ob aksial'noy asimetrii atomnykh yader)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 5, pp 1570-1571 (USSR)

ABSTRACT:

Already in a previous paper (Ref 1) the author investigated the equilibrium shape of nuclei on the basis of the behavior of nucleons in an infinitely deep potential well with vertical walls; the ellipsoidal nuclei (semiaxes  $a_x r_0$ ,  $a_y r_0$ ,  $a_z r_0$ ) were subjected to a coordinate transformation (ellipsoid  $\rightarrow$  sphere with  $r_0$ ), and it was shown that in the new variables the operator of the kinetic energy of the nucleon may be decomposed into 2 parts: into  $-(\hbar^2/2M)$  and  $\hat{V}$ ;  $\hat{V}$  may, according to the degree of deformation, be expanded in a series which is broken off after the first term. As deformation parameters  $\beta$  and  $\gamma$  are used, which may be represented as functions of the semiaxes.  $\beta$  is identical with Bohr's  $\beta$ ,  $\gamma$  is in first approximation proportional to Bohr's  $\beta$  ( $\gamma \approx (5/4\beta)^{1/2}$ ). If  $\beta$  and thus also  $\gamma$  is considered to be small, the problem of

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On the Problem of the Axial Asymmetry of Atomic Nuclei

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nuclear asymmetry may be investigated on the basis of the perturbation theory. In the present "Letter to the Editor" the author gives an example for the calculation of the energy levels of nucleons in dependence on  $\beta$  and  $\gamma$  accurately up to terms of the second order for s-, p-, d- and f-states; the case with  $l = 3$  and  $|m| = 1$  is explicitly written down. A numerical evaluation of the energy for various configurations shows that the energy minimum may correspond to a nonaxial equilibrium shape. Thus, for the following configuration of nucleons of one type  $(1s)^2(1p)^6(1d)^4$ , which corresponds to the  $Mg^{24}$ -nucleus, the energy minimum is about  $\beta \approx 0.3$  and  $\gamma \approx 7^\circ$ ; for the configuration  $(1s)^2(1p)^6(1d)^{10}(2s)^2(1f)^2$ , which corresponds to the  $Ti^{44}$ -nucleus, it is about  $\beta \approx 0.2$  and  $\gamma \approx 5^\circ$ . By means of the model used by the author it is thus found that the equilibrium shape of a nucleus may actually deviate from axial symmetry, which fact is also in agreement with the results obtained by Geylikman (Ref 5), Davydov and Filippov (Ref 6). There are 6 references, 5 of which are Soviet.

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Fizicheskii institut im. P. N. Lebedeva Akademii nauk SSSR  
(Physics Institute imeni P. N. Lebedev of the Academy of Sciences,



21(1)

80V/56-37-2-31/56

AUTHOR: Zaikin, D. A.

TITLE: The Ground Levels of Odd Non-spherical Nuclei According to the Independent-particle Model

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 2(8), pp 540-545 (USSR)

ABSTRACT: This is a calculation of the level scheme of the nucleons in a spheroidal potential well by means of the method of asymptotic expansions of spherical functions. The mathematical difficulties encountered in this approach are discussed. The determination of the energy levels of nucleons with the mass  $M$  restrained in a square potential well, which in space has the shape of an ellipsoid of revolution, is reduced to the solution of the Schrodinger equation

$$\left\{ -\frac{\hbar^2}{2M} \Delta + V(\vec{r}) - \frac{\kappa}{M^2 c^2} \hat{s} [\nabla V(\vec{r}) \cdot \hat{p}] \right\} \psi = E \psi, \text{ where } c \text{ denotes}$$

the velocity of light;  $\hat{s}$  and  $\hat{p}$  the spin and momentum operators of the nucleon, and  $\kappa$  a dimensionless constant. The potential  $V(\vec{r})$  has the form

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The Ground Levels of Odd Non-spherical Nuclei According to the Independent-particle Model

$$v(\vec{r}) = \begin{cases} 0 & \text{within the ellipsoid } (x^2 + y^2)/a^2 + z^2/b^2 = 1 \\ v_0 & \text{outside the ellipsoid.} \end{cases}$$

The semi-axes  $a$  and  $b$  of the ellipsoid are interrelated by the condition that the volume is independent of the degree of deviation from a spherical shape:  $a^2b = r_0^3$ ,  $r_0$  denoting the radius of a sphere with the same volume. The solution of the above Schrodinger equation is expressed through spheroidal functions. The numerical calculations of the energy levels of the nucleons has been carried out on the electronic computer "Ural" of the Fizicheskii institut imeni P. N. Lebedeva AS SSSR (Institute of Physics imeni P. N. Lebedev of the AS USSR) for values of 35, 42 and 50 Mev of the constant  $V_0$  and for values 0.50, 0.70, 0.80, 1.20, 1.25, 1.35, 1.50, 1.70, and 2.0 of the ratio  $b/a$  of the semi-axes. It appears from the calculations that the energy levels and their orders are only little dependent upon the constant  $V_0$  (within the range of  $V_0$  under consideration). The variation of the constant  $\kappa$  of the spin-spin coupling exerts a considerable influence upon the order of the levels. In a diagram the level scheme of the

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SOV/56-37-2-31/56

The Ground Levels of Odd Non-spherical Nuclei According to the Independent-particle Model

nucleons in a square potential well, which has been computed for  $V_0 = 42$  Mev and  $\kappa = 30$  is shown. The nucleon levels show a qualitatively roughly similar behavior, the differences being limited to details. The calculated results were compared with the experimental data for the spin and parity of the ground levels of odd non-spherical nuclei, which showed good agreement. It has been proved experimentally that a great number of the nuclei investigated in this study have very low isomeric levels. These levels can also be identified according to the scheme set up in this paper. The results of this identification are compiled in a second table. The level scheme of nucleons found herein shows a good agreement with the spin and parity values of the ground levels and of the low isomeric levels determined experimentally. This level scheme in general shows an agreement as good as that by S. G. Nilsson, but it lacks the other's drawbacks. As a conclusion a number of details are discussed. There are 1 figure, 2 tables, and 17 references, 6 of which are Soviet.

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The Ground Levels of Odd Non-spherical Nuclei According to the Independent-  
particle Model

SOV/56-37-2-31/56

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR  
(Institute of Physics imeni P. N. Lebedev of the Academy  
of Sciences, USSR)

SUBMITTED: April 2, 1959

Card 4/4

ZAIGIN, D.A., kand. fiziko-matem. nauk

Experiment conducted with extraordinary accuracy. Nauka i zhizn'  
27 no.8:34-37 Ag '60. (MIRA 13:9)  
(Electromagnetic waves)

BELYAK, V.I.; ZAIKIN, D.A.

Rotational states of nonspherical even-even nuclei. Izv.  
AN SSSR. Ser. fiz. 25 no.9:1163-1168 '61. (MIRA 14:8)

1. Fizicheskiy institut imeni P.N. Lebedeva AN SSSR.  
(Nuclei, Atomic)

ZAYKIN, D.A., kind.fiz.-mat. nauk

Nuclear molecules. Khimiya i fizika no. 2:26-27, 51 P '61.  
(Chem. 14:2)

(Nuclear reactions)

L 16146-63

ENT(m)/EDS APFC/ASD

5/1504/62/014/000/0003/0051

ACCESSION NR: AT3001850

AUTHOR: Zaikin, D. A.

TITLE: Contribution to the theory of nonspherical nuclei according to the model of independent particles

SOURCE: AN SSSR, Fizicheskiy Institut. Trudy, v. 14, 1962, 3-58

TOPIC TAGS: nucleus, atomic, spherical, nonspherical, well, potential, even, odd, mass number, moment, quadrupole, ground state, energy level, Pd, Ag, W, Os

ABSTRACT: This theoretical paper, which comprises the author's dissertation for the degree of Candidate of Physico-Mathematical Sciences submitted at the Fizicheskiy Institut AN SSSR (Physics Institute, AN SSSR) in June 1957, deals with



of the spin-orbit interaction; Sec. 3 takes into account the influence of the spin-orbit interaction on the energy levels of the nucleus.

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L 16146-63

ACCESSION NR: A73001850

the well and the spin-orbit interaction; Sec. 4 provides a comparison between the scheme of the energy levels thus obtained and experimental data relative to the spins and parities of the ground state and the lower isomeric states of odd nuclei having forms differing strongly from the spherical. Chapter II regards the problem of the possible deviation of the form of atomic nuclei from an axially-symmetrical form; in it a calculation is performed for the energy levels of nucleons in an infinitely deep, rectangular, nonaxially-symmetrical, well. The calculation is performed for states of the nucleons which, in the instance of the spherically-symmetrical well, pass to the s-, p-, d-, and f-states. The perturbation method employed is analogous to the method used by S. A. Moszkowski (Phys. Rev., v. 99, 1955, 803) in calculating the energy levels of nucleons in a rectangular, axially-symmetrical, well. Chapter II adduces also the results of

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ACCESSION NR: AT3001850

$\gamma$ -oscillations and shows that this level lies in the region of single-particle excitations of the nucleus; expressions are obtained here for the wave functions of the  $\gamma$ -vibration states of the nucleus. The expressions are then used in Sec. 9 to calculate the probability of electromagnetic excitation of the first  $\gamma$ -vibration level. This probability is found to be 2 to 3 orders of magnitude smaller than the probability of the electromagnetic excitation of the first rotational level of the axially-symmetrical nucleus. Sec. 10 evaluates the applicability of the qualitative results obtained to real nuclei. Conclusions: (1) The scheme of nucleon energy levels constructed here for an axially-symmetrical rectangular well accords satisfactorily with experimental data on the spins and parities of the ground states and low isomeric states of odd nuclei differing strongly from the spherical shape; the accordance thus obtained is better than that for the scheme of K. Gottfried (Phys. Rev., v. 103, 1956, 1017). (2) The energy-level scheme constructed here affords an accordance with experimental data equally as good as that of the scheme of S. G. Nilsson (Dan. Mat-fys. medd., v. 29, no. 16, 1955), but is free of the defect of the Nilsson scheme that a greater degree of sphericity than that actually observed must be postulated. (3) Comparison of the author's scheme with the Nilsson scheme shows that the author's scheme is less critical with respect to the selection of the form of the mean field, particularly for greater degrees of nonspher-

city of the model.

(4) The nucleon levels obtained in the present study (see well as

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ACCESSION NR: AT3001850

2

in the Nilsson scheme) for the nuclei  $\text{Pd}^{105}$  and  $\text{Ag}^{107, 109}$  for which the sign of the quadrupole moment and, consequently, the sign of the nonsphericity parameter  $\beta$  is unknown, accords much better with experiment if  $\beta$  is assumed to be negative, that is, if these nuclei are assumed to be flattened. (5) Both the author's and the Nilsson scheme do not contradict the hypothesis of a flattened form of the odd isotopes of the actinides; only a dependable measurement of the signs of their quadrupole moments can provide a definitive answer to this problem. (6) Both the author's and the Nilsson scheme yield anticipated values of  $11/2^+$  and  $13/2^+$  for the low isomeric states of the nuclei  $\text{W}^{183}$  and  $\text{Os}^{189}$  for which the spins and the parities are not known. (7) The calculation of the nucleon energy levels in a non-axial, infinitely deep, well in terms of the parameters  $\beta$  and  $\gamma$  that characterize the form of a nucleus shows that the model of infinite particles on its simplest form admits the possibility of a nonaxially-symmetrical equilibrium form of atomic nuclei as postulated by A. S. Davydov and G. F. Filippov (ZhETF, v. 35, 1958, 440; Nucl. Phys., v. 8, 1958, 237). (8) The great stability of the form of atomic

Card 4/5

fruitful discussion. The author is also representative of the interest of L. M. Frank  
in this work and of his useful clarification. The author thanks a go Z. P. Mukhin,  
highly talented and very intelligent person.

ASSOCIATION: Muzhikova, Institute AN SSSR (Physics Institute, AN SSSR)

SUB CODE: 1H EL NO REF SOV: 031 OTHER: 053

Card 5/5

ZAIKIN, D.A.; SERGEYEV, V.A.

Nucleon interaction with  $H^3$  and  $He^3$  at low energies. Izv. AN SSSR.  
Ser.fiz. 30 no.1:148-155 Ja '66.

(MIRA 19:1)

1. Fizicheskly institut im. P.N.Lebodeva AN SSSR.

**ZAIRIN, D.F.**

Some characteristics of foot-and-mouth disease in a zone  
where stock is driven away to pasturage. Veterinariia 37  
no.4:33-35 Ap'60. (MIRA16:6)

1. Tadzhikskiy nauchno-issledovatel'skiy institut zhivotno-  
vodstva.  
(TAJIKISTAN--FOOT-AND-MOUTH DISEASE)

*ZAIKIN, F.*

AID P - 395

Subject : USSR/Aeronautics  
Card 1/1 Pub. 135, 9/18  
Author : Zaikin, F., Col. of the Guard, Eng.  
Title : Economy of Aviation Equipment in Complex Climatic Conditions  
Periodical : Vest. vozd. flota, 8, 49-51, Ag 1954  
Abstract : The author discusses problems of aircraft maintenance in complex atmospheric conditions such as low temperatures, high humidity, etc. Examples of dealing with these problems are given. Names of officers are mentioned.  
Institution : None  
Submitted : No date

ZAIKIN, G.

Potentials of Aleksei Tkachenko. Mashinostroitel' no.5:6-7  
My '63. (MIRA 16:7)

(Volgograd—Boring machinery)



ZAIKIN, G.

Efficiency promoter. Mashinostroitel' no.10:3 0 '62.  
(MIRA 15:10)

(Volgograd—Machine-shop practice)

ZAIRIN, G.

Stand for wheel alignment. Avt.tramp. 38 no.7:26-27 J1  
'60. (MIRA 13:7)

(Automobiles--Wheels)

ZAIKIN, G.

Golden hands. Mashinostroitel' no.9:12-14 S '64. (MIFA 17:10)

ZAIKIN, G.G.

Work of reference groups in the Volgograd plant "Barrikady."  
NTI no.1:12-13 '64. (MIRA 17:3)

ZAIKIN, G.G.

Some suggestions of innovator G.V.Parshin. Mashinostroitel' no.10:  
33 0 '65. (MIRA 18:10)

ZATKIN, G.G.

Cutter for machining trapezoid threads. Mashinostroitel' no.10:25  
0 '63. (MIRA 15:12)

ZAIIIN, O.I., inzhener.

Using conical roller bearings in locomotives. Vest.TSNII MPS no.3:43-  
52 W '56. (ICRA 10:1)  
(Locomotives) (Roller bearings)

GENICH, B.A., kand.tekhn.nauk; CHEBANENKO, V.M., kand.tekhn.nauk; ZAIKIN,  
G.I., inzh.

Increasing the fatigue strength of axles by means of ball burnishing.  
Trudy TSNII MPS no.221:149-160 '61. (MIRA 19:1)  
(Car axles)



CHEBANENKO, V.M., kand.tekhn.nauk; ZAIRIN, O.I., inzh.

Testing the strength of the press joint of the wheel and axle in  
connection with axle strengthening by means of burnishing. Trudy  
TSNII MPS no.221:161-174 '61. (MIRA 1:1)  
(Car axles--Testing)

ZAIRIN, G.V.; MONCHENKO, V.P.; IVANOV, B.P.

Stepped drills. Mashinostroitel' no.1:26 Ja '62. (MIRA 15:1)  
(Twist drills)

ZAIKIN, G.V.

Drilling dynamometer. Stan.1 instr. 32 no.7:32-33 J1 '61.  
(MIRA 14:6)

(Dynamometer)

ZAIKIN, I.

29733

MTS v bor'bye za organizatsionno-khozyaystvennoye ukryeplyeniye kolkhovov.  
Bol'shyevik sov. Latvii, 1949, No. 15, S. 17-25

So: Ietopis' No. 40

ZAIGIN, I.I., inzh.

Using cross circulation methods in water-discharging installations.  
Gidr.stroi. 28 no.3:53-55 Mr '59. (MIRA 12:4)  
(Spillways)

14(6)

SOV/98-59-3-13/17

AUTHOR:

Zaikin, I.I., Engineer

TITLE:

The Utilization of Lateral Water Circulation in Water Spillways (Primeneniye poperechnoy tsirkulyatsii na vodosbrosnykh sooruzheniyakh)

PERIODICAL:

Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 3, pp 53-55 (USSR)

ABSTRACT:

As a result of lateral water circulation in the dam spillway, many spiral water streams are formed in the tail waters, all of the same progressing speed at which surface streams flow in one direction, and bottom streams - in another, without forming a back wave. The actual level of tail waters is formed at the end of the spillway. This permits the builders to shorten the length of bracing of tail waters. The utilization of lateral circulation also improves the process of energy dissipation. A basic part of the energy is dissipated on the spillway and the rest of energy and pulsation, evenly distributed along the flow, do not damage either the apron or

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SOV/98-59-3-13/17

The Utilization of Lateral Water Circulation in Water Spillways

the apronwell. The author describes laboratory tests he made on models, with guiding shields in one case, and with obliquely disposed buttresses in the other. In both cases the results were satisfactory. There are 4 sets of diagrams.

Card 2/2

L 07862-67 EWT(d)/EWP(c)/EWP(v)/ENP(k)/ENP(l) IJP(c)  
ACC NR: AP6011252 (N) SOURCE CODE: UR/0413/66/000/006/0094/0094

AUTHORS: Levykin, F. V.; Zaikin, I. M.; Sapozhnikov, E. Ya.; Chernyshev, V. Ya.

ORG: none

TITLE: A method for ultrasonic inspection of bent bars. Class 42, No. 179978

SOURCE: Izobreteniya, promyshlennyye obrabotki, tovarnyye znaki, no. 6, 1966, 94

TOPIC TAGS: ultrasound, ultrasonic emitter, ultrasonic equipment, ultrasonic flaw detector, ultrasonic inspection, ultrasonic sensor, ultrasonic wave

ABSTRACT: This Author Certificate presents a method for ultrasonic inspection of bent bars, based on the utilization of surficial ultrasonic waves. To increase the sensitivity of the recording apparatus used in detection of cracks, the angle through which the emitters are turned is so chosen that the ultrasonic rays produced by the emitters and moving along the cylindrical surface of the neck of the bent bar intersect at the center of bend. To decrease the influence of errors on the accuracy of inspection and to maintain a constant angle of intersection of the ultrasonic rays, the emitters, in the course of inspection, progress along the outer surface of the neck opposite to the surface being checked on the inspected rod. To determine the dimensions of the detected crack, the transverse size of the cracks is measured with a feeler operating on the principle of reflex. The determination of the longitudinal dimensions is attained with an echo-measuring feeler.

SUB CODE: 13/ SUBM DATE: 05Feb63 UDC: 658.562.6 621.824.3 620.179.16  
Card 1/1



DMITRIYEVA, A.I.; SHUSHKIN, A.A.; MIRONOV, K.M.; DERBENEV, S.I.;  
GRANICHNOVA, Z.P.; OKUN', M.M.; MIKHAYLOVA, N.N.; ANDREYEV,  
V.V.; MAKEYEV, V.S.; OSIPOVA, V.M.; L'VOVYY, V.S.;  
SMIRNOV, G.N., nauchnyy sotr.; ZAIKIN, I.N.; TAL'NISHNIKH,  
G.N.; MORKOVIN, V.A.; GALAGAN, V.A.; RAZUVAYEV, A.A., red.;  
SOKOLOVA, V.Ye., red.; TRISHINA, L.A., tekhn. red.

[Manual on the industrial primary processing of flax]  
Spravochnik po zavodskoi pervichnoi obrabotke l'na. Izd.2.,  
perer. i dop. Moskva, Rostekhizdat, 1962. 755 p.  
(MIRA 15:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut lubyanykh  
volokon (for Dmitriyeva, Shushkin, Mironov, Derbenev,  
Granichnova, Okun', Mikhaylova, Andreyev, Makeyev, Osipova).
  2. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany  
truda (for Smirnov). 3. Upravleniye zagotovki i pervichnyy ob-  
rabotki l'na Kalininskogo sovmarkhoza (for Zaikin, Tal'nishnikh,  
Morkovin, Galagan, L'vovyy).
- (Flax) (Flax processing machinery)

ZAICHINA, I. N.

Dissertation defended in the Botanical Institute imeni V. L. Komarov  
for the academic degree of Candidate of Biological Sciences:

"Introduction of Maple Into the Moscow Area and Its Breeding for Leaf  
Color."

Vestnik Akad Nauk No. 4, 1963, pp. 119-145

CHEN, N.G.; FEDOROV, O.G.; FEVRALEV, K.D.; POLETAYEV, B.L.; ZAIKIN, I.P.

Study of the external corrosion of the pipes of a waste-heat  
boiler. Prom. energ. 15 no.8:30-34 Ag '60. (MIRA 15:1)  
(Boilers--Corrosion)  
(Steampipes--Corrosion)

ZAIRIN, L.N., inzh.

Organization of wire broadcasting in rural areas. Vest. sviazi  
24 no.3:22-23 Mr '64. (MIRA 17:4)

ZAIKIN, M.D.; GOROKHOVA, N.P.; STEFADU, Z.A.; ZAIKIN, T.A.;  
MOISEYEV, V.S.

Treatment of angina pectoris with nitranol. Khim. i med. no.16:  
17-20 '61. (MIRA 17:8)

ZAIGIN, M.D. (Moskva)

Processes of healing in myocardial infarct. *Klin.med.* 36 no.5:103-110  
1958  
(MIRA 11:7)

1. Iz kafedry propedev'tiki vnutrennikh bolezney (zav. - deystvitel'nyy  
chlen AMN SSSR prof. V.Kh. Vasilenko) i kafedry patologicheskoy anatomii  
(zav. - cheln-korrespondent AMN SSSR prof. A.I. Strukov) i Moskovskogo  
ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.  
(MYOCARDIAL INFARCT, physiology  
healing (Rus))

SEMENOV, Mikhail Grigor'yevich; ZAIKIN, Mikhail Fedorovich;  
MORDOVSKIKH, V.P., red.; KOLBICHEV, V.I., tekhn.red.

[Kopeysk] Kopeisk. Cheliabinsk, Cheliabinskoe knizhnoe  
izd-vo, 1959. 229 p. (MIRA 13:2)  
(Kopeysk--History) (Kopeysk--Economic conditions)

AZBEL', S.M.; ZAIKIN, M.I.; KRYUKOV, P.I.; SAVIN, I.M.; NOVINOV,  
V.P., inzh., retsenzent; KHARLAMOV, P.G., inzh., red.;  
VOROTNIKOVA, L.P., tekhn. red.

[Repair of failures of the ChME2 diesel locomotive] Ustranenie  
neispravnostei teplovoza ChME2. Moskva, Transzheldorizdat,  
1963. 53 p. (MIRA 16:5)  
(Diesel locomotives--Maintenance and repair)



GRINEVICH, G.P., doktor tekhn. nauk; ZAIKIN, M.N., kand. tekhn. nauk

Over-all mechanization and automation of loading and unloading.  
Mekh. i avtom. proizv. 18 no.6:14-19 Je '64. (MIRA 17:9)

ZAIKIN, M.N., kand. tekhn. nauk

--- Increase labor productivity in loading and unloading. Mzh. ---  
i avtom. proizv. 17 no.6:1-4 Je 163. (MIRA 16:7)

(Loading and unloading)

ZAIKIN, M.N.

Research in the field of mechanization of loading and unloading  
operations. Biul.tekh.-ekon.inform.(os.nauch.-issl.inst.nauch. i  
tekh.inform. no.6:80-81 '62. (MIRA 15:7)  
(Loading and unloading)

SAMODUMOV, A.Ya.; MERKULOV, V.A.; ZAIKIN, M.N.

"Freight routing and improvement of its efficiency" by  
V.T. Osipov. Reviewed by A.IA. Samodumov, V.A. Merkulov,  
M.N. Zaikin. Vest. AN SSSR 32 no.11:145-146 N '62.  
(MIRA 15:11)

(Railroads--Freight)

ZAIKIN, M.N.

Research in the field of industrial transportation. *Bul.tekh.-  
ekon.inform.Gos.nauch.-issl.inst.nauch.i tekhn.inform.* no.5:82-  
83 '62. (MIRA 15:7)

(Transportation--Research)

ZAIKIN, M.N., kand.tekhn.nauk; SHKURIN, V.A., kand.tekhn.nauk

Basic trends in the development of transportation in containers  
and packets. Mekh. i avtom.proizv. 19 no.1:13-17 Ja '65. (MIRA 18:3)

ZAIKIN, M.N., kand. tekhn. nauk; ANTONOV, V.A., kand. tekhn. nauk

Basic trends in the development of continuous conveying systems.  
Mekh. i avtom. proizvod. 19 no.9:1-4 S '65. (MIRA 18:9)

ACC NR: AP7001748

(A) SOURCE CODE: UR/0193/66/000/010/0029/0031

AUTHOR: Zaikin, M. P.

ORG: none

TITLE: New types of electroerosion machining instruments

SOURCE: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 10, 1966, 29-31

TOPIC TAGS: industrial instrument, electroerosion, electroerosion machining, metal electroforming, electrode design

ABSTRACT: The article discusses a new process for producing copper or brass electrodes by drawing through dies made of hard alloys such as T15K6 or VK8. The dies are small plates 1 to 1.5 mm thick, soldered to steel mandrels after being copper plated by an electric spark process, which erodes the surface and diffuses copper particles into the hard alloy. This can be done on a universal electroerosion machine, which grips the end of the copper electrode rod 6—8 mm in diameter after it is fed automatically through the die, where a pulse charge transfers copper particles to the die face. Before drawing through the final die, the rod is perfectly contoured by preliminary dies, grooved rolls, and contour burnishing. Tubular electrodes for piercing machine parts with holes more than 2 mm in diameter and length can also be drawn in lengths of 1000 mm from copper or brass pipe by drawing through similar dies clamped in a turning lathe. Electroerosion electrodes for planishing interior

Card 1/2

UDC: 621.9.048.4:621.3.035.2



ACC. NR: AP7091748

hollow surfaces more than 6 mm in diameter can be made from steel rod wound with copper or brass wire laid in a spiral groove, which is cut on a copying lathe.  
Orig. art. has: 1 figure.

SUB CODE: 11/ SUBM DATE: none

Card 2/2

SURNAME, Given Names

ZAIMAN, M.

Country: Rumania

Academic Degrees: -not given-

Affiliation: \*)

Source: Timisoara, Timisoara Medicala, Vol VI, No 1, Jan-Jun 1961, pp 62-70.

Data: "Studies on the Naso-Pharyngian Flora in Children Between 0 and 15 Years of Age in an Isolated Community During the Spring Season."

Authors:

ZAIMAN, M. ✓

ELIAS, A. ✓

FRASINEL, N. ✓

GHERMAN, D. ✓

LEVIN, S. ✓

MOISE, O.

\*) Work performed at the Epidemiology Section of the Institute of Hygiene and the Microbiology Laboratory of the Medico-Pharmaceutic Institute (Sectia de Epidemiologie a Institutului de Igiene si Laboratorul de Microbiologie I.M.F.), Timisoara.

87

ZATKIN, M.F.

Universal semi-automatic code-technical machine. Bul. tekhn.-  
eksp. inform. Gos. nauch.-issl. inst. nauch. i tekhn. inform. 18  
no. 7:23-25 31 '65. (MIRA 18:9)

ZAIKIN, MIKHAIL PAVLOVICH

KUDRYAVTSEV, Ivan Vasil'yevich, doktor tekhnicheskikh nauk; BOLTUNOV, Aleksandr Konstantinovich, inzhener; ZAIKIN, Mikhail Pavlovich; UDAL'TSOV, A.N., glavnyy redaktor; MALOV, Kandidat tekhnicheskikh nauk, redaktor; KORSHUNOV, B.S., kandidat tekhnicheskikh nauk, redaktor; GRISHIN, V.M., inzhener, redaktor.

[Strengthening fillets of large shafts by surface peening. New construction of ring electrodes of electromachining tools. Vibration equipment for electric spark machining for hardening and metal coating] Uprochnenie galtelei krupnykh valov poverkhnostnym naklepom. Novaya konstruktsiya kol'itsavogo elektroda elektroerozionnogo stanka. Vibratsionnaya ustanovka dlia elektroerozionnogo uprochneniia i pokrytiia metallov. Moskva, 1956. 11 p. (Peredovoi proizvodstvenno-tekhnicheskii opyt. Ser.8, Mekhanicheskoe uprochnenie detalei i metody elektricheskoi obrabotki metallov. No.T-56-252/6) (HRA 10:9)

1. Moscow. Institut tekhniko-ekonomicheskoy informatsii (Metal cutting, Electric)

ZAIKIN, N.

Problems of weed control. Zashch. rast. ot vred. i bol. 10  
no. 5:60 '65. (ICRA 18:6)

SHILOV, P.M., doktor tekhn.nauk; KRIVOSHEYEV, A.Ye., doktor tekhn.nauk;  
DEMIDOVICH, N.S., kand.tekhn.nauk; RUDNITSKIY, L.S., kand.tekhn.nauk;  
FLOROV, K.V., kand.tekhn.nauk; SHAPOVAL, I.M., kand.tekhn.nauk;  
OLEYNICHENKO, V.G., inzh.; ZAIKIN, N.A., inzh.; TITOV, A.I., inzh.

Replacing alloyed steels by high-strength cast iron in manufacturing  
machine parts. Mashinostroenie no.4:59-61 JI-Ag '65. (MIRA 18:8)

ZAIKIN, N.D.

Machinery manufacturing laboratory at the Leningrad Economic  
Council. Mashinostroitel' no.4:47 Ap '63. (MIRA 16:5)  
(Leningrad--Engineering laboratories)

ZAIKIN, N.I. (Kiyev)

Expand the links of clothing industry enterprises with the trading  
organizations. Shvein. prom. no.3:22-26 My-Je '64.  
(MIRA 17:9)



ZAIKIN, N.I., nauchnyy sotrudnik; POLUNOV, V.Ya., nauchnyy sotrudnik

Need for an expansion of business connections between textile industry enterprises and trade organizations. Tekst. prom. 23  
no.6:16-19 Je '63. (MIRA 16:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut trgovli i  
obshchestvennogo pitaniya.  
(Textile industry)

ZAIKIN, N.N., agronom

Pyrotechnics in plant protection. Zashch. rast. ot vred. i bol.  
8 no.9:60 S '63. (MIRA 16:10)

ZAIKIN, N.N.

Seminar on herbicides. Zashch. rast. ot vred. i bol. 8 no.12:51  
D '63. (MIRA 17:3)

1. Starshiy agronom po gerbitsidam Ministerstva sel'skogo khozyays-  
tva SSSR.

*ЗАКАЗ, N. N.*

**KRASOVSKIY, Ye.S.; ZAIKIN, N.N.**

Modernization of equipment, Mashinostroitel' no.4:22-25 Ap '57.  
(MLRA 10:5)

(Lathes)

~~ZAIKIN~~ N.N.  
~~ZAYKIN~~, ALN.

AUTHOR: Zaikin, N.N.

122-4-19/29

TITLE: A discussion on the application of the "configuration diagram" method for hydraulic systems. (Diskussiya o primeneniі metoda strukturnykh razvertok gidrosistem.)

PERIODICAL: "Vestnik Mashinostroeniya" (Engineering Journal), 1957, No.4, pp. 81-82 (U.S.S.R.)

ABSTRACT: Report on a discussion meeting concerned with proposals by the Candidate of Technical Sciences A.S. Shashkin for the preparation of configuration diagrams in hydraulic systems. Shashkin, A.S. read a report on the essence of the method and the specification of configuration diagrams ("Experience in the compilation of configuration diagrams of hydraulic systems" published by ITEIN AN USSR 1956). Configuration diagrams are intended for improving the introduction and operation of hydraulic systems, particularly of the complex type. They permit familiarisation with the system and analysis of its work in the minimum time. The design methods can also be based on configuration diagrams. Starting with technical requirements, the elements of the working cycle are specified for which typical pipe circuits are then established. The complete system is composed of the elementary circuits. The approved variant among the configuration diagrams examined is

1/3

A discussion on the application of the "configuration diagram" method for hydraulic systems. (Cont.)

122-4-19/29

developed into a design study from which the hydraulic system is finally designed and detailed. The scientific use of configuration diagrams lies in the wider application of electro-hydraulic analogies and of model research into hydraulic systems. Hydraulic symbols proposed by the author, by ENIMS and U.S. standards were compared. The compilation of a National Standard was advocated on the basis of configuration symbols, rather than conventional symbols. In the discussion, Likhachev pointed out that existing documentation on hydraulic systems in the form of semi-diagrammatic schemes is too complex for familiarisation and too laborious in design. Configuration diagrams are advanced methods and their introduction on an industrial scale will facilitate design, familiarisation and operation. Yevsyukov, V.V. noted the need for published information on the new method. Vorobeychuk, Yu.G. discussed the U.S. Standards in which he saw considerable advantages. In the setting up of the Soviet Standards some international unification should be sought. Kuznetsov, M.N. stressed the importance of improving documentation and making it more widely available in order to derive the benefits of the new system. Yermakov, V.V. communicated some experience in the study of hydraulic systems at the

2/3

A discussion on the application of the "configuration diagram" method for hydraulic systems. (Cont.)

122-4-19/29

Moscow Machine Tool Institute (Moskovskiy Stankostroitel'niy Institut) and noted that electrical analogies are not always applicable. The conference, after hearing a letter from

3/3 Professor A.I. Voshchinin, adopted resolutions in favour of promoting the new methods and on the need for a unified terminology.

AVAILABLE:

ACC NR. AP7005327

SOURCE CODE: UR/0131/66/003/012/3459/3462

AUTHOR: Iveronova, V. I.; Tikhonov, A. N.; Zaikin, P. N.; Zvyagina, A. P.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Determination of the phonon spectrum of crystals from the specific heat

SOURCE: Fizika tverdogo tela, v. 8, no. 12, 1966, 3459-3462

TOPIC TAGS: phonon spectrum, distribution function, specific heat, crystal property, thermodynamic function, aluminum

ABSTRACT: By using an approximate relation between the frequency distribution function and the specific heat, the authors demonstrate that in the harmonic approximation it is possible to calculate the phonon spectrum of crystals from the specific heat and from other thermodynamic functions. The approximate frequency distribution function is obtained directly from the experimental data on the specific heat. The determination of the approximate distribution function is facilitated by the fact that, in the approximation considered, the phonon spectrum is a continuous and piecewise smooth function with a derivative having a finite number of discontinuities. The resultant approximation is a smooth function which carries a minimum of characteristic information (line structure) and satisfies the equation with a specified accuracy. By way of an example, the frequency distribution function of aluminum, obtained from the integral equation using experimental information on the specific heat of aluminum,

Card 1/2



ACC NR: AP7005327

is presented. It is noted in the conclusion that the method can be used without modification to determine the energy spectrum of any Bose system from its thermodynamic functions. Orig. art. has: 2 figures and 9 formulas.

SUB CODE: 20/ SUBM DATE: 03Jan66/ ORIG REF: 005/ OTH REF: 003

Card 2/2

**ZAIRIN, P.P., inzh.; KROPETS, E.S., inzh.**

Preventing hydraulic smashes in steam engines. *Energetik* 6 no.8:18-19  
Ag '58. (MIRA 11:10)

(Steam engines--Safety measures)

AUTHORS: Zaikin, P.P.; Kropets, E.S., Engineers 91-58-8-13/34  
TITLE: Preventing Hydraulic Shocks in Steam Machinery (Preduprezhdeniye gidravlicheskikh udarov v parovykh mashinakh)  
PERIODICAL: Energetik, 1958, Nr 8, pp 18-19 (USSR)

ABSTRACT: Serious damage can occur in steam machinery in two ways: 1) by stopping the machinery without first switching off the condensation system; 2) by stopping the water-jet air pump while the machinery is still working. Both cause a pressure difference to arise and water is sucked back into the low-pressure cylinder. To prevent this, the Lyudinovskiy lokomobil'nyy zavod (Lyudinov Locomobile Plant) devised a safety valve to be fitted between the machinery and the condenser in the exhaust pipe. This consists of a hollow spherical brass float mounted on a vertical axis which rises when water is fed back from the condenser to seal off the

Card 1/2

Preventing Hydraulic Shocks in Steam Machinery

91-58-8-13/34

entry to the machinery. The valve was tested in the plant and proved effective in both the damaging circumstances mentioned. There is 1 diagram.

1. Steam machinery--Operation
2. Valves--Applications

Card 2/2

AUTHOR: Zaikin, S.A., Mining Engineer SOV-127-58-10-21/29

TITLE: On an Improved Concentration Technology for Kerch' Ores  
(Ob uluchshenii tekhnologii obogashcheniya kerschenskikh rud)

PERIODICAL: Gornyy zhurnal, 1958, Nr 10, pp 68-71 (USSR)

ABSTRACT: The total expenditure for the concentration process at the Kamyshburun Concentration Plant is 30-35% and the expenditure for raw material is up to 65-67% of the cost of 1 ton of concentrate. These percentage figures are reversed at the concentration plant of the Yuzhnyy gorno-obogatitel'nyy kombinat (The Southern Ore Concentration Trust - YuGOK) of the Krivoy Rog basin: expenditure for raw material - 36% and expenditure for concentration processes - 61% of the cost of 1 ton of concentrate. Research conducted by the Mekhanobrchermet Institute showed that this difference was explained by the application of a less expensive but obsolete technological concentration process at the Kamyshburun Plant. Moreover concentrates obtained at this plant were of a poor quality as to content and extraction of iron. The Institute proposed a new concentration process with a new method of concentration in jigging machines and magnetic

Card 1/2

SOV-127-58-10-21/29

On an Improved Concentration Technology for Kerch' Ores

separators with powerful magnetic fields. The results of the research are presented in tables 1-4 and the new scheme is described in detail. It was found that the new method of concentration would increase the iron content in the concentrate by 2% and decrease the losses of iron in tailings by 1-2%. There are 4 tables, 1 flow chart and 3 Soviet references.

ASSOCIATION: Mekhanobrchermet

1. Ores--Processing 2. Industrial plants--Equipment

Card 2/2

ZAIKIN, S.A.; KARMAZIN, V.I.; MARGULIS, V.S.; SHUPOV, L.P.

Improving crushing flowsheets in mining and ore-dressing  
combines. Gor. zhur. no.10:74-76 0 '61. (MIRA 15:2)

1. Mekhanobrchermet, Krivoy Rog.  
(Crushing machinery)

VINOGRADOV, V.S., inzh.; AL'TSHULER, M.A., kand. tekhn. nauk; POLYAKOV, V.G., inzh.; KUROCHKIN, A.N., inzh.; KARMAZIN, V.I., doktor tekhn. nauk; ZAIKIN, S.A., inzh.; OSTROVSKIY, G.P., inzh.[deceased]; NAUMENKO, P.I., inzh.; BOBRUSHKIN, L.G., inzh.; RUSTAMOV, I.I., inzh.; SHIFRIN, I.I., inzh.; GOLOVANOV, G.A., inzh.; KRASOVSKIY, L.A., inzh.; TSUMBALENKO, L.N., inzh.; RAVIKOVICH, I.M., inzh.; BAZILEVICH, S.V., kand. tekhn.nauk; ZORIN, I.P., inzh.; ZUBAREV, S.N., inzh.; TIKHOVIDOV, A.F., inzh.; SHITOV, I.S., inzh.; GAMAYUROV, A.I., inzh.; KUSEMBAYEV, Kh.N., inzh.; DEKHTYAREV, S.I., inzh.; VORONOV, I.S., inzh.; BURMIN, G.M., inzh.; BARYSHEV, V.M., inzh.; GOLOVIN, Yu.P., inzh.; MARCHENKO, K.F., inzh.; KUCHKOV, L.F., inzh.; NESTERENKO, A.M., inzh.; KADANOV, V.F., inzh.; PATRIKEYEV, N.N., inzh.[deceased]; ROSSMIT, A.F., inzh.; SOSEDOV, O.O., inzh.; POKROVSKIY, M.A., inzh., retsenzent; POLOTSK, S.M., red.; GOL'DIN, Ya.A., glav. red.; GOLUB'ATNIKOVA, G.S., red. izd-va; BOLDYREVA, Z.A., tekhn. red.

[Iron mining and ore dressing industry] Zhelezorudnaya promyshlennost'. Moskva, Gosgortekhzdat, 1962. 439 p.

(MIRA 15:12)

1. Moscow. Tsentral'nyy institut informatsii chernoy metallurgii.  
(Iron mines and mining) (Ore dressing)



ZAIKIN, S.A.; KARMAZIN, V.I.; SHUPOV, L.P.

Use of ball-free mills for the comminution of iron quartzites.  
Obog. rud no.6:39-41 '61. (MIRA 15:3)

1. Mokhanobrohermet.  
(Crushing machinery) (Iron ores)

ZAIKIN, S. A.

ZAYKIN, S. A., gornyy inzhener.

Converting an ore dressing plant to remote-control operations.

Gor. zhur. no. 7:34-37 J1 '56.

(MLRA 9:9)

1. Nachal'nik Tsentral'noy obogatitel'noy fabriki rudoupravleniya  
Ingulets.

(Ingulets--Ore dressing) (Remote control)

ZAIKIN, M.D.; GOROKHOVA, N.P.; STEFADU, Z.A.; ZAIKIN, T.A.;  
MOISEYEV, V.S.

Treatment of angina pectoris with nitranol. Khim. i med. no.16:  
17-20 '61. (MIRA 17:8)

ZAIKIN, T.O.; arkhitekt

Planning and construction of the "Kopytovka" microdistrict. Cor.  
khoz. Mosk. 35 no.8:20-22 Ag. '61. (MIRA 14:8)  
(Moscow--City planning) (Apartment houses)

ZAIKIN, V.A., inzhener.

Using a vibration tubes in concrete work of hydraulic structures.,  
Gidr. stroi. 26 no.5:46-47 My '57. (MIRA 10:6)  
(Concrete construction)

VUL'FSON, N.S.; ZARETSKIY, V.I.; PUCHKOV, V.A.; ZAIKIN, V.G.; SHIROB, A.M.;  
ANTONOV, V.A.; SHEMYAKIN, M.M., akademik

Mutual transformations of cyclols and cyclodepsipeptides studied  
by the method of fragmentary mass spectrometry. Dokl. AN SSSR  
153 no.2:336-339 N '63. (MIRA 16:12)

1. Institut khimii prirodnikh soyedineniy AN SSSR.

VUL'FSON, N.S.; ZARETSKIY, V.I.; ZAIKIN, V.G.

Mass spectrometric study of natural coumarins. Izv. AN SSSR.  
Ser. khim. no.12:2215-2218 D '63. (MIRA 17:1)

1. Institut khimii prirodnikh soedineniy AN SSSR.

VUL'FSON, N.S.; TORGOV, I.V.; ZARETSKIY, V.I.; LEONOV, V.N.; ANANCHENKO, S.N.;  
ZAIKIN, V.G.

Mass spectrometric determination of the configuration of epimeric  
tert. alcohols in the D-homosteroid series. Izv.AN SSSR.  
Ser.khim. no.1:184-186 Ja '64. (MIRA 17:4)

1. Institut khimii prirodnikh soyedineniy AN SSSR.



ZARETSKIY, V.I.; VUL'FSON, N.S.; ZAIKIN, V.G.; KISIN, A.V.; SHIROB. A.M.;  
ANTONOV, V.K.; SHEMYAKIN, M.M.

Mass spectrometric study of cyclols containing aromatic rings.  
Izv. AN SSSR Ser. Khim. no.11:2076-2079 N '64 (MIRA 18:1)

1. Institut khimii prirodnikh soyedineniy AN SSSR.

VULFSON, N.S.; ZABITSKIY, V.I.; ZAIKIN, V.G.

Mass spectrometry of natural furanocoumarins. Dokl. AN SSSR  
155 no. 5:1104-1107 Ap '64. (MIRA 17:5)

1. Institut khimii prirodnykh soyedineniy AN SSSR. Predstavleno  
akademikom M.M. Shemyakinym.

ZAIKIN, Veniamin Mikhaylovich, inzh.

Standard logic elements. Izv.vys.ucheb.zav.; elektromekh. '7  
no.10:1231-1233 '64. (MIRA 18:1)

1. Gidrofizicheskiy institut AN UkrSSR.

ACC NR: AP6021781

SOURCE CODE: UR/0413/66/000/012/0048/0043

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ABSTRACT: This Author Certificate presents a method for compensating signal phase drifts in narrow-band filters with an automatic tracking system for the voltage phase at the filter output. To simplify the device and to decrease the resulting phase errors, quadratic phase compensation is used to introduce into the output signal a variable voltage with regulated amplitude shifted by  $\pm 90^\circ$  relative to the voltage at the filter output (see Fig. 1).

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